

## ABSTRACT

Provide an electrolyte membrane for a fuel cell, the electrolyte membrane having a structure in which pores of a porous substrate are filled with an electrolyte polymer, and for which, even if the membrane thickness and porosity of the substrate are equal and the amount of electrolyte used for filling is also the same, the highest fuel cell performance is given.

An electrolyte membrane formed by filling pores of a porous substrate with an electrolyte polymer, and having a ratio of the maximum value to the minimum value (maximum value / minimum value) of the ionic conductivity when measured in a plane direction in the range of 1 to 1.5.